

a plurality of dipole radiating elements, said radiating elements comprised of first and second co-located, orthogonal dipoles, said dipoles aligned at first and second predetermined angles with respect to said vertical axis, said radiating elements and ground plane producing first electromagnetic fields in response to said electromagnetic signals;

a plurality of non-conductive supports, said supports connected to said ground plane and perpendicular to said vertical axis and placed between selected of said plurality of dipole radiating elements;

a plurality of independent metallic parasitic elements unconnected to said dipoles placed in a selected of said plurality of supports, said first electromagnetic fields exciting currents in said metallic parasitic elements, said currents creating second electromagnetic fields, said second electromagnetic fields canceling with portions of said first electromagnetic fields.

10. (Once Amended) An antenna for simultaneously receiving separate electromagnetic signals comprising:

a ground plane with a length, said ground plane having a vertical axis along said length;

a plurality of radiating elements, said radiating elements comprised of first and second co-located, orthogonal dipoles, said first dipoles aligned at substantially a +45 degree angle with respect to said vertical axis, said second dipoles aligned at substantially a -45 degree angle with respect to said vertical axis, said radiating elements and ground plane producing a first electromagnetic field;

a plurality of non-conductive supports connected to said ground plane, said supports perpendicular to said vertical axis and placed between selected of said plurality of dipole radiating elements;

a plurality of independent metallic parasitic elements unconnected to said dipoles placed in a selected of said plurality of supports, said first electromagnetic fields exciting currents in said metallic parasitic elements, said currents creating second electromagnetic

A²
(concluded)
fields, said second electromagnetic fields canceling with portions of said first electromagnetic fields; and

diversity reception means coupled to said plurality of radiating elements for selecting between said plurality of electrical signals.

16. (Once Amended) A method for providing high isolation for an array of radiating elements comprising the steps of:

simultaneously receiving separate electromagnetic signals;

providing a ground plane having a vertical axis;

A³
providing a plurality of dipole radiating elements, said radiating elements comprised of first and second co-located, orthogonal dipoles, said dipoles aligned at a predetermined angle with respect to said vertical axis, said radiating elements having a top surface;

producing first electromagnetic fields in said radiating elements responsive to said electromagnetic signals;

providing a plurality of non-conductive supports, and placing said supports perpendicular to said vertical axis and between selected of said plurality of dipole radiating elements;

B
providing a plurality of independent metallic parasitic elements unconnected to said dipoles ^{and} placed in a selected of said plurality of supports[.];

exciting currents in said metallic parasitic elements;

creating second electromagnetic fields radiating from said parasitic elements; and

canceling with portions of said first electromagnetic fields with said second electromagnetic fields.

19. (Once Amended) An antenna for simultaneously receiving separate electromagnetic signals comprising:

A⁴
a ground plane with a length and having a vertical axis along said length;

a plurality of dipole radiating elements, said radiating elements comprised of first and second co-located, orthogonal dipoles, said dipoles aligned at first and second

B predetermined angles with respect to said vertical axis, said ~~antennas~~ radiating elements producing first electromagnetic fields in response to said electromagnetic signals;

a plurality of non-conductive supports, said supports connected to said ground plane and parallel to said vertical axis and placed adjacent selected of said plurality of dipole radiating elements;

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(concluded) B and 1 a plurality of independent metallic parasitic elements unconnected to said dipoles placed in a selected of said plurality of supports, said first electromagnetic fields exciting currents in said metallic parasitic elements, said currents creating second electromagnetic fields, said second electromagnetic fields canceling with portions of said first electromagnetic fields.

27. (Once Amended) A method for providing high isolation for an array of radiating elements comprising the steps of:

simultaneously receiving separate electromagnetic signals;

providing a ground plane having a vertical axis;

A5 providing a plurality of dipole radiating elements, said radiating elements comprised of first and second co-located, orthogonal dipoles, said dipoles aligned at a predetermined angle with respect to said vertical axis, said radiating elements having a top surface;

producing first electromagnetic fields in said radiating elements responsive to said electromagnetic signals;

providing a plurality of non-conductive supports, and placing said supports parallel to said vertical axis and adjacent selected of said plurality of dipole radiating elements;

B providing a plurality of independent metallic parasitic elements unconnected to said dipoles ^{and} placed in a selected of said plurality of supports[.];

exciting currents in said metallic parasitic elements;

creating second electromagnetic fields radiating from said parasitic elements; and

canceling with portions of said first electromagnetic fields with said second electromagnetic fields.
